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Notice of Allowability	Application No.	Applicant(s)	
	10/657,451	PARKER ET AL.	
	Examiner	Art Unit	
	Leo Boutsikaris	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to RCE filed on 2/16/06.
- 2. ☒ The allowed claim(s) is/are 1-3,5,20-26,70-76,78,90-91.
- 3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/16/2006 has been entered.

Election/Restrictions

Claim 2 is generic to claims of species B-G and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 21/2, 22/2, 23/2, 24/2, 25/2, and 26/2, are no longer withdrawn from consideration since all of the claims to the species depend from or otherwise include each of the limitations of an allowed generic claim. According to the amendment of 12/19/2005, said claims have become claims 21, 22, 23, 24, 25, 26, respectively, i.e., the multiple dependence has been deleted.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. James Leas (Reg. 34,372) on 3/31/2006.

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The application has been amended as follows:

IN THE CLAIMS

In claim 75, line 1, "recoding" is replaced by --recording--.

The following is an examiner's statement of reasons for allowance:

Claims 1-3, 5, 20-26, 70-76, 78, 90-91 are allowable over the prior art of record for at least the reason that even though the prior art discloses methods for fabricating holograms utilizing a substantially in-line holographic recording configuration, wherein the reference and object beams travel in a substantially parallel fashion from a mask to the holographic recording medium, where said mask is opaque and comprises apertures producing diffracted/scattered object light and diffracted/scattered reference light, the prior art fails to teach or reasonably suggest, a method of fabricating a holographic mask comprising the step of providing a non-opaque object mask capable of transmitting a portion of the illumination beam as undiffracted reference wavefronts, and creating overlapping object wavefronts, wherein the illumination beam directed along the axis causes the object mask to allow said transmitted undiffracted reference wavefronts to pass therethrough to reach the area where they interact with the object wavefronts, as set forth by the claimed combination.

In Greenway's recording method the reference light does not pass through the object mask. Groh (US 3,622,219, Fig. 1) discloses a holographic recording method where an opaque diaphragm 4 comprising pinholes 6 and 5 is used to create a reference beam and an object beam originating from said pinholes, respectively. However, in said method, the reference beam is a diffracted beam, since it is created by the interaction of the incident light with a small pinhole.

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Leith (US 3,580,655, Fig. 15) discloses a holographic recording method where a screen 51 comprising a section 25 related to the object beam and a central pinhole 41, is used to create diffracted object and reference wavefronts, respectively. Similarly, Kato (US 3,917,380, Figs. 1, 9) discloses a holographic recording method where an apertured mask 16 comprising an object aperture and a reference pinhole, is used to create diffracted object and reference wavefronts, respectively. Meyerhofer (US 3,909,111) discloses a holographic recording of a viewing screen where a diffuser plate 14 is used to provide both the object and reference wavefronts for the holographic recording. Edwards (US 6,762,865, Fig. 1), which is not prior art, discloses a self-referenced holographic recording set-up, where a diffuser placed at the zero-order frequency Fourier component of the object beam is used to create reference wavefronts traveling substantially parallel with the object wavefronts. Finally, King (US 2003/0039001, Figs. 6A, 6B), which is not prior art, discloses an in line holographic recording system, where a hollow, ring-shaped mirror 604 is used to pass therethrough an object beam 616, and reflect therefrom reference light 618, so that both object and reference light travel in line towards the holographic recording medium 620.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-208.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D., J.D.
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March 31, 2006



LEONIDAS BOUTSIKARIS
PRIMARY EXAMINER